

SEQUENCE LISTING

<110> Turner, C. Alexander Jr.
Nehls, Michael C.
Friedrich, Glenn
Zambrowicz, Brian
Sands, Arthur T.

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Encoding the Same

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Ser	His	Ile	Leu	Glu	Gln	Arg	Thr	Ser	Ser	Asn	Val	Ile	Asn	Lys	Arg	50	55	60	
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tacttttcca	tggcagccag	taagggcaat	gcaatcggcc	ttcatgggct	tggtcttctt	1140
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<210> 8

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 <212> DNA
 <213> Homo sapiens

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 aaaaatttta cagatgaagg agaccagcta tttaagatgg gcatcaaggt tctccagcag 360
 tctaaaagcc aaaaacaaaa agaagaagcc tacctacttt ttgccaaagc agctgacatg 420
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 aaggcactga tatattacac ctttgggaagt gctggaggaa acatgatgtc ccagatgatt 660
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 <212> PRT
 <213> Homo sapiens

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 Arg Asn Val Thr Thr Gln Val Ser Val Asn Glu Ile Lys Gln Tyr Leu
 35 40 45
 Ser His Ile Leu Glu Gln Arg Thr Ser Ser Asn Val Ile Asn Lys Arg
 50 55 60
 Glu Asn Leu Leu Glu Lys Lys Lys Asn Gln Arg Lys Ile Arg Ile Lys
 65 70 75 80
 Gly Ile Gln Asn Lys Asp Ile Leu Lys Arg Asn Lys Asn His Leu Gln
 85 90 95

Lys	Gln	Ala	Glu	Lys	Asn	Phe	Thr	Asp	Glu	Gly	Asp	Gln	Leu	Phe	Lys	
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Glu	Ala	Tyr	Leu	Leu	Phe	Ala	Lys	Ala	Ala	Asp	Met	Gly	Asn	Leu	Lys	
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Ala	Met	Glu	Lys	Met	Ala	Asp	Ala	Leu	Leu	Phe	Gly	Asn	Phe	Gly	Val	
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Gln	Asn	Ile	Thr	Ala	Ala	Ile	Gln	Leu	Tyr	Glu	Ser	Leu	Ala	Lys	Glu	
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Gly	Ser	Cys	Lys	Ala	Gln	Asn	Ala	Leu	Gly	Phe	Leu	Ser	Ser	Tyr	Gly	
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Ile	Gly	Met	Glu	Tyr	Asp	Gln	Ala	Lys	Ala	Leu	Ile	Tyr	Tyr	Thr	Phe	
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Gly	Ser	Ala	Gly	Gly	Asn	Met	Met	Ser	Gln	Met	Ile	Leu	Gly	Tyr	Arg	
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Tyr	Tyr	Lys	Lys	Val	Ala	Asp	Tyr	Ile	Ala	Asp	Thr	Phe	Glu	Lys	Ser	
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			260					265					270			
Leu	Ser	Ser	Asn	Ser	Glu	Ile	Leu	Asp	Trp	Asp	Ile	Tyr	Gln	Tyr	Tyr	
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Lys	Phe	Leu	Ala	Glu	Arg	Gly	Asp	Val	Gln	Ile	Gln	Val	Ser	Leu	Gly	
	290					295					300					
Gln	Leu	His	Leu	Ile	Gly	Arg	Lys	Gly	Leu	Asp	Gln	Asp	Tyr	Tyr	Lys	
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Ala	Leu	His	Tyr	Phe	Leu	Lys	Ala	Ala	Lys	Ala	Gly	Ser	Ala	Asn	Ala	
				325					330					335		
Met	Ala	Phe	Ile	Gly	Lys	Met	Tyr	Leu	Glu	Gly	Asn	Ala	Ala	Val	Pro	
			340					345						350		
Gln	Asn	Asn	Ala	Thr	Ala	Phe	Lys	Tyr	Phe	Ser	Met	Ala	Ala	Ser	Lys	
		355					360						365			
Gly	Asn	Ala	Ile	Gly	Leu	His	Gly	Leu	Gly	Leu	Leu	Tyr	Phe	His	Gly	
	370					375					380					
Lys	Gly	Val	Pro	Leu	Asn	Tyr	Ala	Glu	Ala	Leu	Lys	Tyr	Phe	Gln	Lys	
385					390					395					400	
Ala	Ala	Glu	Lys	Gly	Trp	Pro	Asp	Ala	Gln	Phe	Gln	Leu	Gly	Phe	Met	
				405					410					415		
Tyr	Tyr	Ser	Gly	Ser	Gly	Ile	Trp	Lys	Asp	Tyr	Lys	Leu	Ala	Phe	Lys	
			420					425						430		
Tyr	Phe	Tyr	Leu	Ala	Ser	Gln	Ser	Gly	Gln	Pro	Leu	Ala	Ile	Tyr	Tyr	
		435					440						445			
Leu	Ala	Lys	Met	Tyr	Ala	Thr	Gly	Thr	Gly	Val	Val	Arg	Ser	Cys	Arg	
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Thr	Ala	Val	Glu	Lys	Arg	Leu	Thr	Phe	Leu	Lys	Lys	Arg	Arg	Cys	Ile	
465					470					475					480	
Gln	Trp	Arg	Phe	Ser	Tyr	Gly	Ile	Glu	Leu	Pro	Phe	Lys	Ala	Met	His	
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<210> 11

<211> 1731

<212> DNA
<213> Homo sapiens

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atcaataaaa gagaaaatct cctggagaaa aagaagaatc aacgtaaaaat aagaataaaa 240
ggaattcaaaa ataaagatat cttgaagaga aataagaatc atttacaaaa gcaagcagag 300
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<211> 576
<212> PRT
<213> Homo sapiens

<400> 12
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Arg Asn Val Thr Thr Gln Val Ser Val Asn Glu Ile Lys Gln Tyr Leu
35 40 45
Ser His Ile Leu Glu Gln Arg Thr Ser Ser Asn Val Ile Asn Lys Arg
50 55 60
Glu Asn Leu Leu Glu Lys Lys Lys Asn Gln Arg Lys Ile Arg Ile Lys
65 70 75 80
Gly Ile Gln Asn Lys Asp Ile Leu Lys Arg Asn Lys Asn His Leu Gln
85 90 95
Lys Gln Ala Glu Lys Asn Phe Thr Asp Glu Gly Asp Gln Leu Phe Lys
100 105 110
Met Gly Ile Lys Val Leu Gln Gln Ser Lys Ser Gln Lys Gln Lys Glu

		115					120					125				
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	130					135					140					
Ala	Met	Glu	Lys	Met	Ala	Asp	Ala	Leu	Leu	Phe	Gly	Asn	Phe	Gly	Val	
145					150					155					160	
Gln	Asn	Ile	Thr	Ala	Ala	Ile	Gln	Leu	Tyr	Glu	Ser	Leu	Ala	Lys	Glu	
				165						170				175		
Gly	Ser	Cys	Lys	Ala	Gln	Asn	Ala	Leu	Gly	Phe	Leu	Ser	Ser	Tyr	Gly	
			180					185					190			
Ile	Gly	Met	Glu	Tyr	Asp	Gln	Ala	Lys	Ala	Leu	Ile	Tyr	Tyr	Thr	Phe	
		195					200					205				
Gly	Ser	Ala	Gly	Gly	Asn	Met	Met	Ser	Gln	Met	Ile	Leu	Gly	Tyr	Arg	
	210					215					220					
Tyr	Leu	Ser	Gly	Ile	Asn	Val	Leu	Gln	Asn	Cys	Glu	Val	Ala	Leu	Ser	
225					230					235					240	
Tyr	Tyr	Lys	Lys	Val	Ala	Asp	Tyr	Ile	Ala	Asp	Thr	Phe	Glu	Lys	Ser	
				245					250					255		
Glu	Gly	Val	Pro	Val	Glu	Lys	Val	Arg	Leu	Thr	Glu	Arg	Pro	Glu	Asn	
			260					265					270			
Leu	Ser	Ser	Asn	Ser	Glu	Ile	Leu	Asp	Trp	Asp	Ile	Tyr	Gln	Tyr	Tyr	
		275					280					285				
Lys	Phe	Leu	Ala	Glu	Arg	Gly	Asp	Val	Gln	Ile	Gln	Val	Ser	Leu	Gly	
	290					295					300					
Gln	Leu	His	Leu	Ile	Gly	Arg	Lys	Gly	Leu	Asp	Gln	Asp	Tyr	Tyr	Lys	
305					310					315					320	
Ala	Leu	His	Tyr	Phe	Leu	Lys	Ala	Ala	Lys	Ala	Gly	Ser	Ala	Asn	Ala	
				325					330					335		
Met	Ala	Phe	Ile	Gly	Lys	Met	Tyr	Leu	Glu	Gly	Asn	Ala	Ala	Val	Pro	
			340					345				350				
Gln	Asn	Asn	Ala	Thr	Ala	Phe	Lys	Tyr	Phe	Ser	Met	Ala	Ala	Ser	Lys	
		355					360					365				
Gly	Asn	Ala	Ile	Gly	Leu	His	Gly	Leu	Gly	Leu	Leu	Tyr	Phe	His	Gly	
	370					375					380					
Lys	Gly	Val	Pro	Leu	Asn	Tyr	Ala	Glu	Ala	Leu	Lys	Tyr	Phe	Gln	Lys	
385					390					395					400	
Ala	Ala	Glu	Lys	Gly	Trp	Pro	Asp	Ala	Gln	Phe	Gln	Leu	Gly	Phe	Met	
				405					410					415		
Tyr	Tyr	Ser	Gly	Ser	Gly	Ile	Trp	Lys	Asp	Tyr	Lys	Leu	Ala	Phe	Lys	
			420					425					430			
Tyr	Phe	Tyr	Leu	Ala	Ser	Gln	Ser	Gly	Gln	Pro	Leu	Ala	Ile	Tyr	Tyr	
		435					440					445				
Leu	Ala	Lys	Met	Tyr	Ala	Thr	Gly	Thr	Gly	Val	Val	Arg	Ser	Cys	Arg	
	450					455					460					
Thr	Ala	Val	Glu	Lys	Arg	Leu	Thr	Phe	Leu	Lys	Lys	Arg	Arg	Cys	Ile	
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Gly Leu Ile Val Pro Gly Leu Ile Leu Leu Leu Arg Asn His His Gly
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<211> 1728
<212> DNA
<213> Homo sapiens

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<210> 14
<211> 575
<212> PRT
<213> Homo sapiens

<400> 14
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Arg Asn Val Thr Thr Gln Val Ser Val Asn Glu Ile Lys Gln Tyr Leu
35 40 45
Ser His Ile Leu Glu Gln Arg Thr Ser Ser Asn Val Ile Asn Lys Arg
50 55 60
Glu Asn Leu Leu Glu Lys Lys Lys Asn Gln Arg Lys Ile Arg Ile Lys
65 70 75 80

Gly	Ile	Gln	Asn	Lys	Asp	Ile	Leu	Lys	Arg	Asn	Lys	Asn	His	Leu	Gln
				85					90					95	
Lys	Gln	Ala	Glu	Lys	Asn	Phe	Thr	Asp	Glu	Gly	Asp	Gln	Leu	Phe	Lys
			100					105					110		
Met	Gly	Ile	Lys	Val	Leu	Gln	Gln	Ser	Lys	Ser	Gln	Lys	Gln	Lys	Glu
		115					120					125			
Glu	Ala	Tyr	Leu	Leu	Phe	Ala	Lys	Ala	Ala	Asp	Met	Gly	Asn	Leu	Lys
	130					135					140				
Ala	Met	Glu	Lys	Met	Ala	Asp	Ala	Leu	Leu	Phe	Gly	Asn	Phe	Gly	Val
145					150					155					160
Gln	Asn	Ile	Thr	Ala	Ala	Ile	Gln	Leu	Tyr	Glu	Ser	Leu	Ala	Lys	Glu
				165					170					175	
Gly	Ser	Cys	Lys	Ala	Gln	Asn	Ala	Leu	Gly	Phe	Leu	Ser	Ser	Tyr	Gly
			180					185					190		
Ile	Gly	Met	Glu	Tyr	Asp	Gln	Ala	Lys	Ala	Leu	Ile	Tyr	Tyr	Thr	Phe
		195				200						205			
Gly	Ser	Ala	Gly	Gly	Asn	Met	Met	Ser	Gln	Met	Ile	Leu	Gly	Tyr	Arg
	210					215					220				
Tyr	Leu	Ser	Gly	Ile	Asn	Val	Leu	Gln	Asn	Cys	Glu	Val	Ala	Leu	Ser
225					230					235					240
Tyr	Tyr	Lys	Lys	Val	Ala	Asp	Tyr	Ile	Ala	Asp	Thr	Phe	Glu	Lys	Ser
				245					250					255	
Glu	Gly	Val	Pro	Val	Glu	Lys	Val	Arg	Leu	Thr	Glu	Arg	Pro	Glu	Asn
			260					265					270		
Leu	Ser	Ser	Asn	Ser	Glu	Ile	Leu	Asp	Trp	Asp	Ile	Tyr	Gln	Tyr	Tyr
		275					280					285			
Lys	Phe	Leu	Ala	Glu	Arg	Gly	Asp	Val	Gln	Ile	Gln	Val	Ser	Leu	Gly
	290					295					300				
Gln	Leu	His	Leu	Ile	Gly	Arg	Lys	Gly	Leu	Asp	Gln	Asp	Tyr	Tyr	Lys
305					310					315					320
Ala	Leu	His	Tyr	Phe	Leu	Lys	Ala	Ala	Lys	Ala	Gly	Ser	Ala	Asn	Ala
				325					330					335	
Met	Ala	Phe	Ile	Gly	Lys	Met	Tyr	Leu	Glu	Gly	Asn	Ala	Ala	Val	Pro
			340					345					350		
Gln	Asn	Asn	Ala	Thr	Ala	Phe	Lys	Tyr	Phe	Ser	Met	Ala	Ala	Ser	Lys
		355					360					365			
Gly	Asn	Ala	Ile	Gly	Leu	His	Gly	Leu	Gly	Leu	Leu	Tyr	Phe	His	Gly
	370					375					380				
Lys	Gly	Val	Pro	Leu	Asn	Tyr	Ala	Glu	Ala	Leu	Lys	Tyr	Phe	Gln	Lys
385					390					395					400
Ala	Ala	Glu	Lys	Gly	Trp	Pro	Asp	Ala	Gln	Phe	Gln	Leu	Gly	Phe	Met
				405					410					415	
Tyr	Tyr	Ser	Gly	Ser	Gly	Ile	Trp	Lys	Asp	Tyr	Lys	Leu	Ala	Phe	Lys
			420					425					430		
Tyr															

	515		520		525										
Leu	Arg	Asp	Ile	Leu	Phe	Phe	Asn	Phe	Thr	Thr	Arg	Trp	Asn	Trp	Leu
	530					535					540				
Lys	Leu	Asp	Asn	Thr	Ile	Gly	Pro	His	Trp	Asp	Leu	Phe	Val	Ile	Gly
545					550					555					560
Leu	Ile	Val	Pro	Gly	Leu	Ile	Leu	Leu	Leu	Arg	Asn	His	His	Gly	
				565					570					575	

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